

Claims

[c1] **WHAT IS CLAIMED IS:**

1. A device for adjusting a camshaft of an internal combustion engine of a motor vehicle, the device comprising:
 - a stator;
 - a rotor configured to be fixedly connected to a camshaft and rotatable relative to the stator;
 - at least one drive wheel fixedly connected to the stator; wherein the at least one drive wheel is centered by the camshaft.

[c2] 2. The device according to claim 1, wherein the camshaft has a collar and the at least one drive wheel is arranged on the collar.

[c3] 3. The device according to claim 1, wherein the rotor has an end face provided with a recess and wherein the camshaft projects into the recess.

[c4] 4. The device according to claim 3, wherein the collar of the camshaft rests axially against the end face of the rotor.

- [c5] 5. The device according to claim 3, wherein the camshaft rests against an inner wall of the recess of the rotor.
- [c6] 6. The device according to claim 1, wherein the rotor has two end faces and the two end faces are planar.
- [c7] 7. The device according to claim 1, wherein the stator has a peripheral area provided with at least one centering element interacting with at least one counter element provided on the drive wheel for aligning the drive wheel in a rotational direction relative to the stator.
- [c8] 8. The device according to claim 7, wherein the at least one centering element is a recess in a peripheral wall of the stator.
- [c9] 9. The device according to claim 7, wherein the at least one counter element is a shoulder provided on the drive wheel and engaging the at least one centering element.
- [c10] 10. The device according to claim 7, wherein the stator has at least one alignment element interacting with at least one alignment element of a mounting tool for radially aligning the drive wheel relative to the rotor.
- [c11] 11. The device according to claim 10, wherein the at least one alignment element of the stator is an axially extending groove in a peripheral wall of the stator.

